Fall 9-1-2005

CRT 285T.01: PC Hardware Support

Kent Nelson
The University Of Montana

THE UNIVERSITY OF MONTANA - MISSOULA
COLLEGE OF TECHNOLOGY
APPLIED COMPUTING AND ELECTRONICS DEPARTMENT

COURSE SYLLABUS

CRT 285T PC Hardware Support
TERM: Fall 2005
CREDITS: 3
PREREQUISITES: CRT103, CRT112 Operating Systems (recommended)

CLASSROOM MEETINGS: Room HB06, Tuesday, Thursday, 1310-1400
LAB MEETINGS: Room HB06 Monday,1510-1700 (Section 1), Wednesday, 1510-1700 (Section 3)

FACULTY: Kent Nelson Phone: 243-7877 E-mail kent.nelson@mso.umt.edu
OFFICE HOURS: By appointment

COURSE DESCRIPTION:
An in-depth study of personal computer hardware. Focus is on field replaceable components. Topics include: storage devices, system boards, memory, processors, ports, cabling, power supplies, multimedia devices, printers, and troubleshooting.

REQUIRED TEXT:
Managing and Troubleshooting PCs, Mike Myers & Scott Jernigan, McGraw Hill, ISBN 0-07-223146-7

REQUIRED SUPPLIES: Two floppy disks dedicated to this class

OTHER MATERIALS (OPTIONAL):
PC Repair Toolkit: (available from www.belkin.com part no. **F8E060**).
Anti-static Grounding Bracelet: (available from www.belkin.com. part no. **F8E093**).

COURSE OBJECTIVES:
Upon completion of this course:

1. Students will identify basic terms, concepts, and functions of computing system components, including how each component should work during normal operation and during the boot process.
2. Students will identify all field replaceable units found in a personal computer and describe the functionality of each component.
3. Students will identify common peripheral ports, associated cabling, and their connectors.
4. Students will identify hardware methods of upgrading system performance.
5. Students will analyze common symptoms and problems associated with each component, provide solutions to troubleshoot and isolate the problems.
6. Students analyze service methodologies for eliciting problem symptoms from customers.
7. Students will identify the purpose of various types of preventive maintenance products and procedures.
8. Students will analyze issues, procedures and devices for protection within the computing environment, including people, hardware and the surrounding workspace.
9. Students will complete installations of memory modules, storage devices, system boards, processors, power supplies, and multimedia devices.

DISABILITY ACCOMMODATIONS:
Eligible students with disabilities will receive appropriate accommodations in this course when requested in a timely way. Eligible students need to visit with their instructor after class and be prepared to provide a letter from their DSS coordinator.

EVALUATION PROCEDURES:

A final grade will be determined by total points received on assignments and tests divided by total points available. The percent conversion is as follows:

:

Grading Scale:

90-100%	A
80-89%	B
75-79%	C
70-74%	D

EXAMS AND ASSIGNMENTS:

All exams are to be taken on the assigned date and time. Assignments are due at the start of class on the assigned date and time. "Makeup" exams and assignments will be accepted at the instructor's discretion and allowed only in extraordinary situations.

LABS:

Regular classroom attendance is expected. Lab attendance is mandatory. Students more than 10 minutes late for labs will not be given credit for attendance. All students must attend the lab section in which they have registered.

STUDENT CONDUCT CODE:

Students are expected to follow the University of Montana Student Code. The code includes the following:

Academic Misconduct:

… Academic misconduct is defined as all forms of academic dishonesty, including but not limited to:

Plagiarism: Representing another person's words, ideas, data or material as one's own.

Substituting or arranging substitution, for another student during an examination or other academic exercise: Knowingly allowing others to offer one's work as their own.

Copies of the Student Code are available in Student Services or at www.umt.edu/studentaffairs/

FINAL EXAMINATION: Tuesday, December 13, 3:20-5:20

COURSE OUTLINE:

1. Introduction to the Visible Components of the PC
2. Processors
3. Memory
4. System Board, BIOS
5. Expansion Bus
6. Electricity and Power Supplies
7. Storage: Floppy Drives, Hard Drives, CD Drives
8. Other device interfaces: USB, Firewire, SCSI
9. Multimedia
10. Printers
11. Troubleshooting Procedures
12. Networking

WEB RESORUCES:

PC Mechanic website: www.pcmech.com
PC parts website: www.pricewatch.com
The PC guide website: www.pcguide.com
Microsoft Technical support sites: http://www.microsoft.com/technet/, http://support.microsoft.com